

# Green River Flood Control Zone District

2003 Annual Report





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## INTRODUCTION AND BACKGROUND

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The purpose of this annual report is to provide an accounting of 2003 Green River Flood Control Zone District's (District) revenue, expenditures and work program accomplishments. An annual reporting of District's activities is required per Section 4.3.3 of the *Interlocal Agreement for the Administration of the Green River Flood Control Zone District* enacted November 15, 2002 by King County and the Green River Valley cities of Auburn, Kent, Renton and Tukwila (collectively, the Parties) for a ten-year duration. This report also provides a summary of the annual maintenance and repair activities made to the District's flood protection facilities in 2003.

The primary goals and objectives of the interlocal agreement are for the:

1. interagency coordination and cooperation among the Parties on flood hazard reduction planning, programs and projects within the District;
2. integration of policy and technical advisory input to the Green River Flood Control Zone District through the Executive and Technical Committees;
3. development and implementation of contemporary standards and procedures for operating, maintaining and repairing river flood protection facilities and pump stations within the District to maximize public health and safety consistent with the requirements of the federal Endangered Species Act and other applicable federal, state and local laws and regulations; and
4. efficient and effective implementation of flood hazard reduction measures and programs in the Green River Flood Control Zone District.

In 1978, King County and the Green River Valley cities signed an interlocal agreement to form the Green River Basin Program, which supported a more comprehensive and programmatic interjurisdictional flood control and drainage program for the lower Green River Basin. In 1985 and 1992, the Green River Basin Program interlocal agreement was extended with concurrence from King County and the cities of Auburn, Kent, Renton and Tukwila to further support each jurisdiction's shared interest for flood hazard planning, coordination and implementation. In 2002, the interlocal agreement was renewed for a ten-year period and updated the provisions embodied in the 1978, 1985 and 1992 interlocal agreements.

Prior to 1990, the Green River Basin Program was funded by a cost-share arrangement between King County and the Green River cities. Since the activation of the District in 1990, activities are funded by an ad valorem tax levy on all taxable properties within its boundaries.





## ***GREEN RIVER FLOOD CONTROL ZONE DISTRICT***

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The Green River Flood Control Zone District was formed in 1960 by Resolution 31192 of the King County Board of Commissioners with concurrence from the affected lower Green River Valley cities and activated in December 1990. The purpose of the District is to provide a funding base for operation and maintenance of levees, revetments and pump stations on the Green River within the District's boundaries, and to fund administration of the Green River Flood Control Zone District's work program.

The District encompasses areas within seven cities, five Metropolitan King County Council Districts, four State legislative districts, three Congressional districts and portions of unincorporated King County. It approximates the drainage basin of the lower Green River Valley, contains 44,000 acres among some 45,000 parcels, and had a total assessed valuation in 2003 of \$18.24 billion. A map of the District is shown on page 5 of this report.

In accordance with state law regarding special purpose districts, the Green River Flood Control Zone District is a quasi-municipal corporation legally separate from King County and an independent taxing authority of the State of Washington authorized by Chapter 86.15 of the Revised Code of Washington. However, the District's Board of Supervisors, by Washington State statute, is served by the King County Council who are explicitly responsible for the governance of the District.

### **Flood Summary for Water Years 2003-2004 (10/01/02 through 05/05/04)**

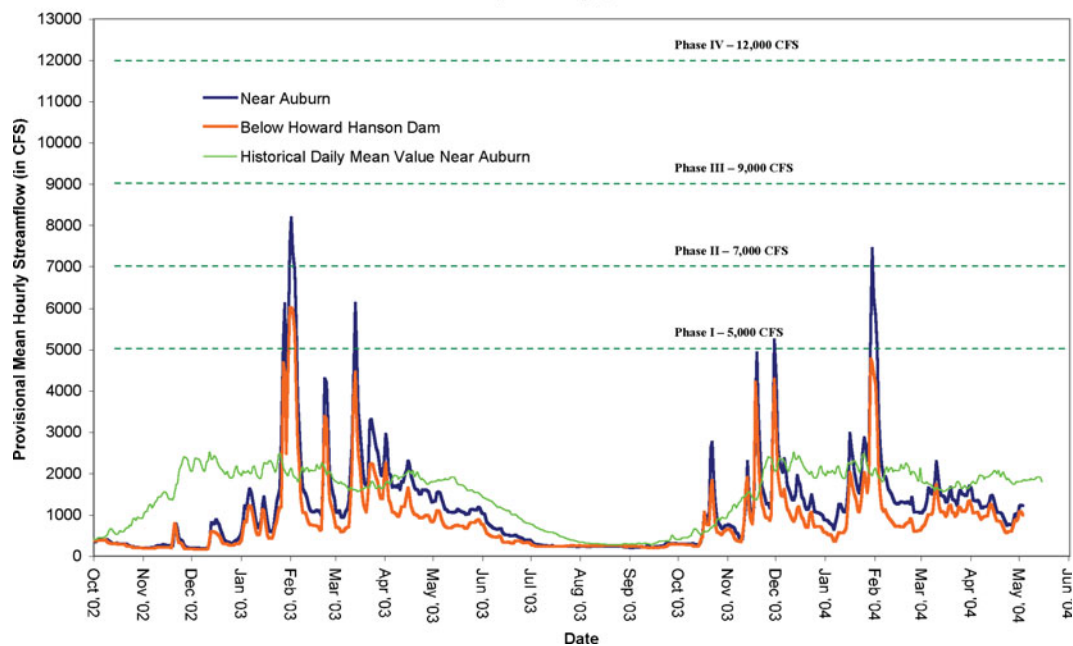
Since the beginning of the 2003 Water Year on October 1, 2002, the Green River has not been subject to any significant flood events largely due to the lack of precipitation and rain-on-snow events which are characteristically the cause of major flood events. Flood events are also held in check because flows on the lower Green River are a direct function of the U.S. Army Corps of Engineers' (USACE) operations of the Howard Hanson dam and flood control reservoir. The majority of flow in the Green River is contributed from the upper watershed as a controlled release from the reservoir.

During a normal flood season, the Green River will experience an average of two to three minor flood events per season and a more significant Phase III flood event on average occurring once every two to three years. Between October 2002 and May 2004, flood events on the Green River have been relatively typical.

As indicated on the following mean hourly flow graph, since the beginning of the 2003 water year as measured at the Auburn gauge, the Green River exceeded the Phase I flood thresholds of 5,000 cubic feet per second (CFS) five times. Of these five events, two exceeded Phase II flood thresholds of 7,000 CFS. The first of two Phase II events on the Green River occurred during a period between January 26–February 5, 2003, when the Auburn gauge measured flows between 3,150 and 8,800 CFS with the maximum flow occurring on January 31. The second Phase II event occurred during a period between January 28–February 5, 2004 when the Auburn gauge measured flows between 2,200 and 7,440 with the maximum flow occurring on January 30.



**MEAN HOURLY STREAMFLOW RATES FOR WATER YEARS 2003-2004**  
**Howard Hansen Dam and Auburn Gages**  
 October 1, 2002 – May 5, 2004



Green River Near Auburn (USGS #12113000): At river mile 32.0, 1.8 miles downstream from Big Soos Creek. Drainage area is approximately 399 square miles.

Green River Below Howard Hanson Dam (USGS #12105900): Located 0.7 miles downstream from Howard Hanson Dam with a contributing drainage area of approximately 221 square miles. Flows at this site as a result are regulated by the operations of Howard Hanson Dam.

Historical Daily Mean Value Near Auburn: This is the historical daily mean value at the Green River Near Auburn gauge based on 67 years of records since August 1936.

Streamflow: Also referred to as discharge, streamflow is the volume of water flowing past a given point in the stream in a given period of time. Streamflow is reported as cubic feet per second ( $\text{ft}^3/\text{s}$ ).

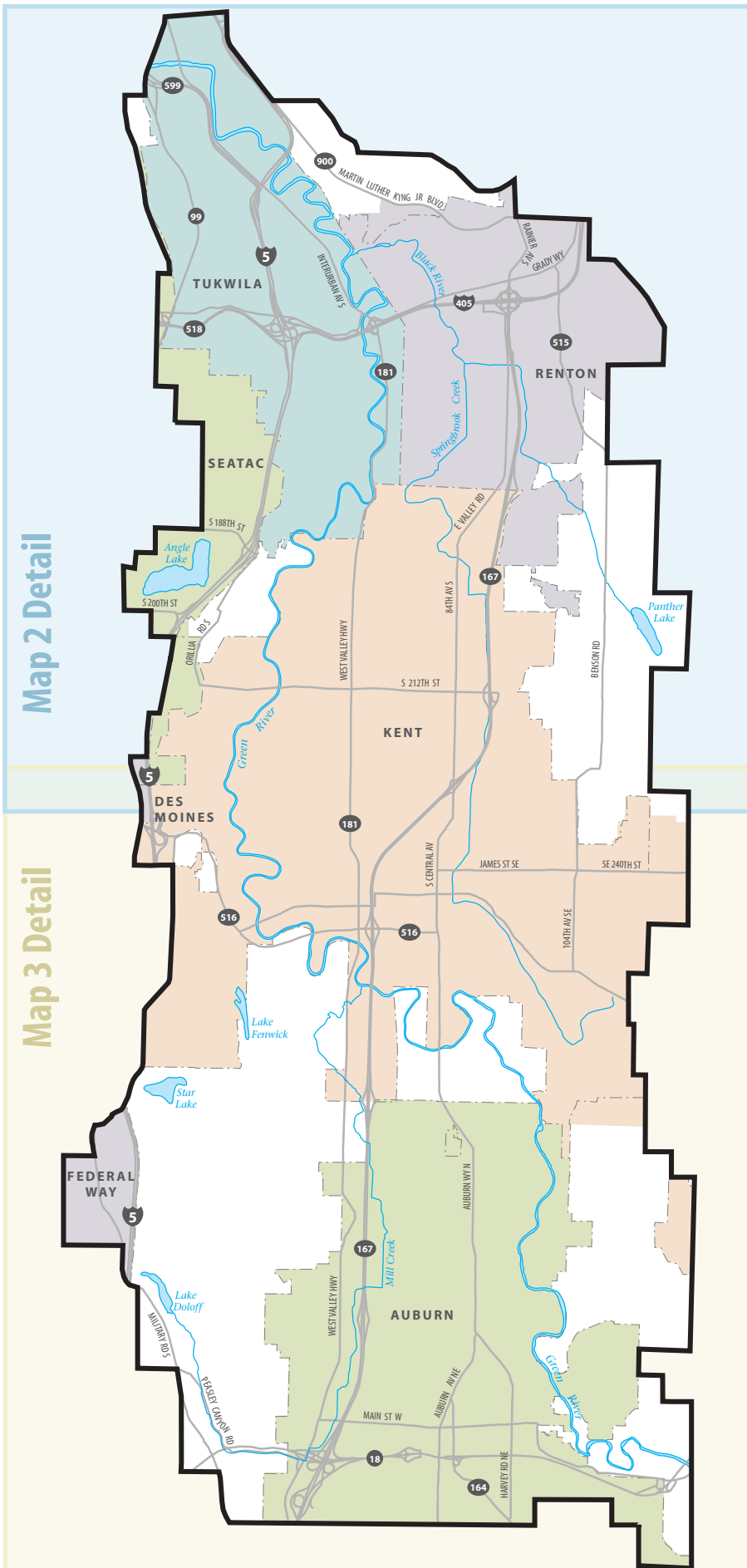


Auburn Gauge

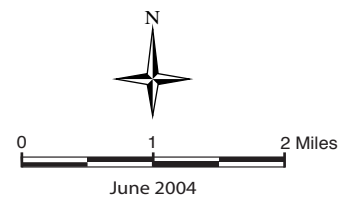








# Map 1 GREEN RIVER FLOOD CONTROL ZONE DISTRICT



**King County**

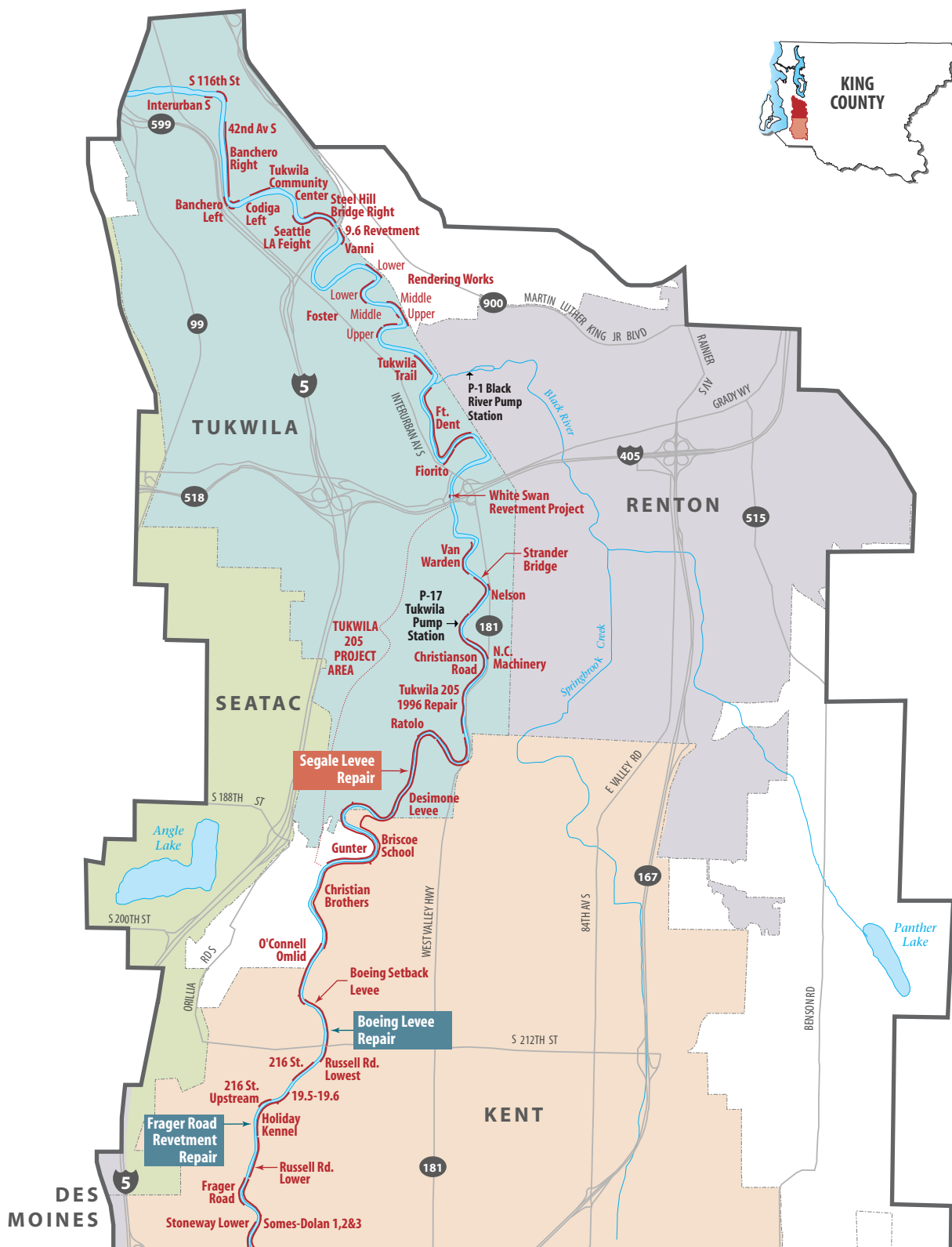
Department of Natural Resources and Parks  
Water and Land Resources Division

**Flood Hazard Reduction Services Section**

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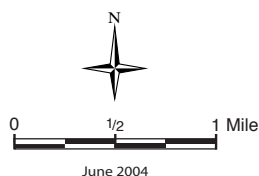




Map 2

## GREEN RIVER FLOOD CONTROL ZONE DISTRICT North Portion

- Name** Proposed 2004-2005 Construction Projects
- Name** 2003 Constructed Projects
- Levee/Revetment
- Lake/River
- Stream
- Major Road



King County

Department of Natural Resources and Parks  
Water and Land Resources Division

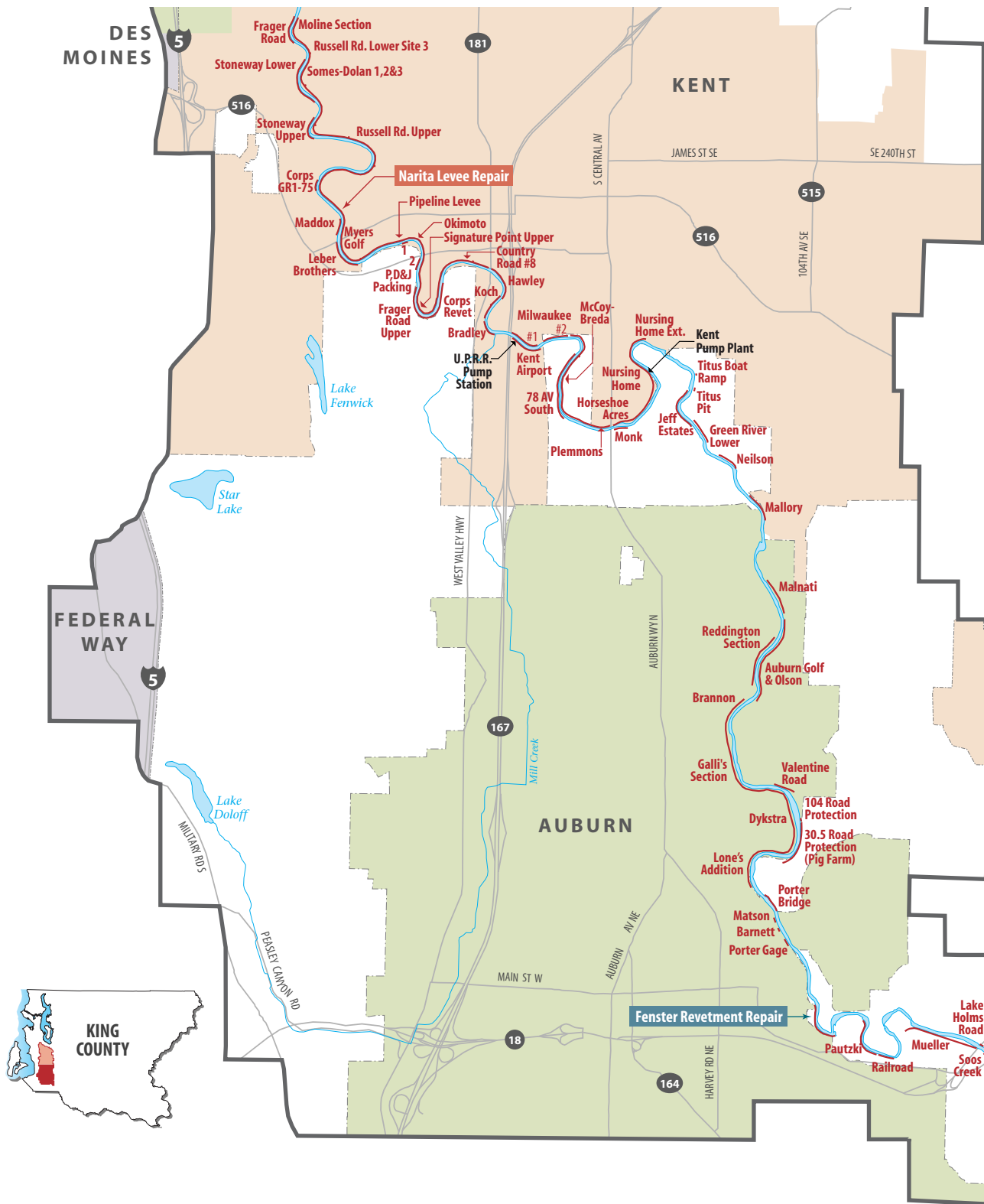
**Flood Hazard Reduction Services Section**

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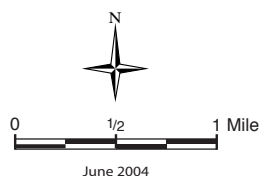




Map 3

## GREEN RIVER FLOOD CONTROL ZONE DISTRICT South Portion

- Name Proposed 2004-2005 Construction Projects
- Name 2003 Constructed Projects
- Levee/Revetment
- Lake/River
- Stream
- Major Road



**King County**

Department of Natural Resources and Parks  
Water and Land Resources Division  
**Flood Hazard Reduction Services Section**

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## 2003 ACCOMPLISHMENTS

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Green River Flood Control Zone District work program and project accomplishments in 2003 included the following activities:

- Completed the second and final phase of the Narita Levee repair project at a cost of \$403,016. The first phase of this two-phase project to repair and structurally stabilize the levee was completed in 1999 at a cost of \$150,359 with support from the Washington State Department of Ecology's Flood Control Assistance Account Program. The first phase of the project consisted of excavating a low bench approximately 12 feet above ordinary high water mark, and relocation of a portion of the 16-foot wide levee crest. The second phase completed in 2003 comprised the reconstruction of the levee's toe and instream and riparian habitat restoration. Total cost of the of the Narita Levee repair project was \$553,375.
- Constructed the Segale Levee Toe Repair project to repair and structurally stabilize the levee in response to additional undercutting erosion and dislocation of toe rock materials previously placed during 1996. The Segale Levee Toe Repair project is one of seven proposed levee and revetment projects identified in the Lower Green River Biological Assessment. The Segale Levee Repair site is a 200-foot segment of the 4.1 mile long U.S. Army Corps of Engineers (USACE) Section 205 federally authorized lower Green River Flood Control Project that was built between RM 12.6 to RM 16.7 along the left bank in 1964 by King County, and subsequently upgraded and accepted into the USACE Section 205 program in 1991. Total cost of this project was \$207,417.
- Constructed the 3<sup>rd</sup> Avenue South Outfall bank stabilization project on behalf of, and funded by, the City of Kent. The City of Kent constructed a new pump station and outfall pipeline to the right bank of the Green River at River Mile 24.4 and within the U.S. Army Corps of Engineers Section 205 Horseshoe Bend levee system, for which the Green River Flood Control Zone District is the local sponsor. The purpose and goals of the project were to enhance the bank stabilization design and construction methods to provide additional protection against erosion, ensure proper stability and prevent future damage to the levee system. Total cost of this project was \$33,131.
- Completed annual Green River Flood Control Zone District flood protection facility maintenance assessments. Included inspections of the Section 205 Tukwila and Horseshoe Bend projects of the U.S. Army Corps of Engineers' Section 205 Program.
- Conducted vegetation management at the Tukwila and Horseshoe Bend Section 205 flood protection facility sites to maintain their eligibility for the U.S. Army Corps of Engineers' PL84-99 emergency repair cost sharing program, and to comply with local sponsor obligations for project maintenance.
- Provided ongoing daily operations and maintenance at the Black River (P-1), Tukwila (P-17) and Segale Pump Stations. Tracked results of smolt counter at the Black River Pump Station in cooperation with the cities of Kent and Renton, and the Muckleshoot Indian Tribe.
- Continued the implementation of the monitoring and assessment program for completed and proposed major maintenance projects as required by local, State and Federal permits. The monitoring program provides essential baseline and post-construction data for project performance analysis and fish habitat utilization at project sites.





- Developed, monitored and tracked the budget and work program for the Green River Flood Control Zone District including the final accounting for the White Swan Revetment repair project completed in 2001. The District received \$45,687 in 2003 for project costs from the Federal Emergency Management Agency's Public Assistance Program under the Nisqually Earthquake disaster declaration via the City of Tukwila.
- Responded to inquiries from the Washington State Auditor's Office on a routine audit of the Green River Flood Control Zone District for the five-year period between January 1, 1997–December 31, 2001. An Accountability Audit Report was issued by the Auditor's Office on April 11, 2003 concluding that the Green River Flood Control Zone District complied with applicable state laws and regulations and its own policies and procedures as well as an evaluation of its public assets. See Appendix A for a copy of the audit report.
- Coordinated and staffed the Green River Flood Control Zone District's Technical Committee and Executive Committee meetings including the preparation of the 2002 Annual Report for the Committees' review.
- Provided technical assistance to WRIA 9 committees on salmon conservation planning efforts and projects, and representation of Green River floodplain management issues in these processes. Includes continued participation and coordination of project development and design with the U.S. Army Corps of Engineers' on the Green-Duwamish Ecosystem Restoration Project to the extent that such projects involve or affect any of the Green River Flood Control Zone District's flood protection facilities.
- Staffed flood patrols in the lower Green River basin consistent with King County's flood warning procedures, and completed river facility damage assessments as needed during and after flood events. Includes the enhanced coordination with the Green River cities and the U.S. Army Corps of Engineers on Howard Hanson Dam operations; organization of the annual Interagency Flood Preparedness meeting for the Green River; and implementation of the Flood Response Manual and Post-Flood Recovery Plan.



## 2003 BUDGET

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### AUTHORIZED 2003 BUDGET

The 2003 Green River Flood Control Zone District budget was approved in Resolution No. GR 30, adopted by the Metropolitan King County Council on November 25, 2002. Consistent with Chapter 86.15.050 RCW, the King County Metropolitan Council members serves as the Board of Supervisors for the Green River Flood Control Zone District.

The District's authorized budget was based on the Executive Committee's recommendation adopted at their October 8, 2002 meeting based on anticipated revenues consisting of \$851,202 in estimated District property tax levy collections; \$203,992 in projected federal and state grants; \$154,830 from the District's undesignated fund balance; and \$50,000 from the District's designated fund balance as a local match to the federal grant funds.

The District's total spending authority in 2003 was \$1,147,612 exclusive of the \$50,300 set aside for the contribution to the District's designated fund balance. Consistent with the requirements of RCW 86.15.140, the District's budget was structured into the following categories:

### 2003 BUDGET BY PROGRAM CATEGORY

District Administration and Management:	\$ 264,542
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#### District Maintenance:

• Major River Facility Repair Projects	\$ 407,943
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• Pump Station Operation, Maintenance & Capital Improvements	\$ 366,019
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• Annual Routine Maintenance & Repair Projects	\$ 85,271
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• Project Performance Monitoring & Assessments	<u>\$ 23,837</u>
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Total Approved 2003 Spending Authority:	<b>\$1,147,612</b>
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#### Contribution to Designated Fund Balance:

• Local Flood Match Funds	\$ 11,000
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• Pump Station Equipment Repair/Replacement	<u>\$ 39,300</u>
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<b>2003 Approved Budget:</b>	<b>\$ 1,197,912</b>
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## **Ad Valorem Tax Levy**

This District is primarily funded by an ad valorem tax levy on all taxable properties within its boundaries. The District's certified levy rate by the King County Assessor in 2003 was 0.04693 cents per \$1,000 of assessed valuation. Therefore, for example, the owner of a \$250,000 home in the District paid approximately \$11.67 to the District levy, a decrease for the fourth consecutive year since 2000. The District's levy rate will continue to decrease on an annual basis as a result of the 1% maximum increase limitations established under Initiative 747 while the assessed valuation of properties in the District appreciate in value at a rate greater than 1%. New construction and increases in utility values also affect the District's overall levy rate and provide a source of addition revenue beyond the 1% in existing assessed property valuations. The increase in the 2003 levy was held to the limitations of the maximum 1% increase established under Initiative 747 and within the Implicit Price Deflator (IPD) levels as established by Referendum 47. In 2003 the IPD was 1.16%.

The District's 2003 net property tax levy collections totaled \$838,298. The difference between the certified projected tax levy collections of \$851,202 and the actual collections is due to several factors that affect general property tax collections (e.g., of delinquent payments from previous years, new construction, and tax refunds).

For a full accounting and description of the District's actual expenditures, revenues and year-end 2003 fund balance total, see the 2003 Year-End Revenue and Expenditure Report and the 2003 Year-End Fund Balance sections on pages 21 through 29 of this report.

## 2003 MAJOR MAINTENANCE PROJECTS

### **Narita Levee Toe Repair River Mile: 21.15, Right Bank, City of Kent Cost: \$ 403,016**

The Narita Levee Toe Repair was constructed during August and September of 2003, with final project completion during the first week of October. Total construction costs for the project were \$403,016. The project repair site is located along the Right Bank of the Green River near River Mile 21.15, next to the City of Kent's Riverbend Golf Course.

The Narita Levee Toe Repair project was the final, instream phase of an overall levee repair initiated in 1999. The reach in question is at an outer bend in the river where erosion of the lower bank was especially pronounced, leading to undercutting of the riverbank and over-steepening of the levee slope. Geotechnical consulting studies performed for Green River levees by consultants to King County and the Green River Flood Control Zone District specified that levee slopes would need to be rebuilt to a minimum overall 2.25H:1V slope inclination. These studies also determined that overall slope stability could be enhanced through the construction of mid-slope benches to buttress the overall height of the embankments.

Following right-of-way negotiations with the City of Kent, the raised levee fill portions of the structure were moved up to 50 feet landward of their original position at the top of the over-steepened riverbank in 1999. A midslope bench was excavated to reduce the weight of the slope over the levee toe, and to set the slope back to a more stable angle. Instream levee toe repairs required an additional three years for preparation of a biological assessment, permitting review and subsequent consultation with the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, the National Marine Fisheries Service and the Washington State Department of Fish and Wildlife.

Construction work on the second phase of the Narita Levee Toe Repair began on August 18, 2003. A vehicle ramp was constructed to access the midslope bench with hydraulic excavators, and an additional six feet of bench excavation depth was needed in order for the construction equipment to reach down far enough into the water column to reconstruct the failed rock toe buttress. This excavation exposed soft, highly saturated clay soils, seeps and springs. In order to manage these site conditions without discharging sediment-laden drainage from the work areas into the Green River, a series of temporary ditches and gravel filter drains was constructed. Site monitoring confirmed the success of these measures. This had the added benefit of providing for improved equipment access during the balance of the repair construction work.



Access to the water for completion of the levee toe repair was obtained by accessing the midslope bench created in previous levee setback phases and excavating an additional six feet of bench depth.



Excavation of the bench exposed soft, highly saturated clay soils, seeps and springs.



A series of site stabilization measures were employed to prevent sediment discharge to the Green River and improve equipment access at the project site.





Damaged and missing levee toe rock from the base of the levee down to the river bed was reconstructed using large diameter quarry stone. Log flow deflectors and habitat structures were chained to the rock.



Lower slope margins were reconstructed using layers of live willow cuttings between lifts of soil protected with biodegradable coir fabric.



This mature alder was preserved intact along the riverbank and large woody debris placed on the midslope bench to provide habitat to salmonids during flood events.

Additional construction site stabilization measures were also needed to address these highly problematic soil conditions. These included over-excavation of soils along the access bench, placement of steel construction plates to provide bearing capacity for the hydraulic excavators and dump trucks, placement of geotextile fabric and gravel covering to serve as an access roadway across wet areas, and placement of crushed rock buttressing along the length of the backslope area exposed during excavation of the bench itself.

Following establishment and stabilization of the construction access bench, a floating log boom of native coniferous logs with intact rootwads was chained together along the full length of the levee toe repair reach. These logs were intended to deflect the river's current away from the toe of the riverbank, and to provide calm water for construction activities along the toe. A track-mounted hydraulic excavator then excavated dislodged toe materials, placed rock bedding and reconstructed the damaged levee toe rock areas using four-to-six-foot diameter quarry stones.

At a spacing of every ten feet, a quarry stone was deliberately selected so as to have a drilled hole passing through the stone, a condition created during drilling operations for blasting at the quarry site in Enumclaw. Anchor chains were then passed through the drilled holes, and the floating log boom was then secured to these anchor stones with non-galvanized marine chain. In this way the log boom was first used as an instream flow deflector for turbidity control during instream toe rock placement, then installed permanently as a series of flow deflectors and large woody debris habitat structures along the full length of the repair site.

Turbidity measurements obtained by Flood Hazard Reduction Services section staff documented the success of this method, which is a substantial improvement on previous attempts to use floating turbidity curtains in the flowing river environment. After anchoring the large woody debris in place, rock toe buttress construction was completed up to the elevation of the ordinary high water mark.

Two layers of live willow cuttings were then placed along the lower bank slopes below the construction bench, supplemented with native shrub and tree species. The planting layers were alternated with lifts of selected fill materials, each of which was wrapped with biodegradable coir (coconut fiber) geotextile fabric for erosion protection. Two feet of crushed rock bedding materials were then re-excavated from the construction access roadway, and were then re-utilized in a cost-savings approach as slope buttressing fill materials for stabilization of the cutslope above the bench. Two feet of planting soils were then replaced the full length of the construction bench to facilitate future site revegetation. The slope buttressing fill layers were also wrapped with coir fabric for erosion protection, and were alternated

with three additional layers of live willow cuttings and additional native shrub and tree species. A mature alder was preserved intact along the riverbank throughout this construction process.

Finished slope areas were then hydroseeded for additional erosion control and project construction was completed on October 6, 2003. The site will continue to be monitored for structural stability, plant growth and survival, and fish habitat utilization consistent with the project's permit requirements.

The total cost of the toe repairs, slope stabilization, and plantings completed during 2003 was \$403,016. The overall project cost of this two-phase project to repair and structurally stabilize the Narita Levee was \$553,375.

### **Segale Levee Toe Repair River Mile: 15.4, Left Bank, City of Tukwila Cost: \$ 207,417**

The Segale Levee Toe Repair Project was completed during July and August of 2003 at a total cost of \$207,417. The Segale Levee is a portion of the federally authorized Lower Green River Section 205 Levee system in Tukwila. The project repair site is located along the left bank of the Green River near River Mile 15.4. Through interlocal agreements with Tukwila, King County has agreed to provide for ongoing maintenance and repair of this levee system, using the resources of the Green River Flood Control Zone District. The levee reach in question has previously been reconstructed on several occasions in response to flood-related concerns with its original structural integrity.

Previous improvements have included:

1. an excavated trench along the entire landward side of the levee, backfilled with rock ballast and filter gravel to prevent under-seepage and soil piping damages;
2. a raised gravel filter berm and supporting buttress structure along the landward portions of the levee to counteract uplift and heaving of exposed valley soils due to underlying hydrostatic pressures during flooding events;
3. construction of a series of pressure-relief wells, connected to a collection manifold to capture the upwelling seepage, and a pump installation discharging to the Green River to relieve high pressure gradients underlying the levee fill structure; and
4. two separate reconstruction efforts repairing riverward portions of the levee structure in response to undercutting by river erosion, over-steepening, and sloughing of the river embankment.

The most recent levee toe repairs were made in response to additional undercutting erosion and dislocation of rock toe materials



Finished slope areas were protected with a covering of coir fabric, hydroseeded and watered to ensure long-term erosion control and slope stabilization.



Access to the lower riverbank for construction of the toe repairs was obtained by excavating existing levee fill materials to create a ramp leading down to a mid-slope construction bench.



Working from the mid-slope bench, the levee toe was reconstructed by excavating dislodged levee toe material and strategically placing four-to-six-foot diameter quarry stones along with large woody debris for flow deflection and habitat structures.





Previously installed layers of native willows were trimmed and retained with intact rooting structures and the cuttings used for revegetation between lifts of soil protected with biodegradable coir fabric.



The lower slope margins were rebuilt using layers of live willow cuttings between lifts of soil protected with biodegradable coir fabric.



Finished slope areas were also protected with a covering of coir fabric, hydroseeded and watered to ensure plant survival for long-term erosion control and slope stabilization.

previously placed during 1996. Shifting of riverbed sediments resulted in down-cutting of the riverbed elevations and settling of toe rock by up to six feet along a 200-foot length of the levee toe. Preparation, review, and approval of a Biological Assessment for compliance with the federal Endangered Species Act resulted in a lengthy process extending over some four years.

Construction was initiated following further coordination with the U.S. Army Corps of Engineers concerning federal levee standards. Additional consultation was required with the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, the U.S. Army Corps of Engineers, and the Washington Department of Fish and Wildlife concerning construction timing and construction methods for turbidity control during instream portions of the project construction. These matters were all resolved within just a few days of the scheduled start for project construction. Work began at the site on July 21, 2003.

In order to gain access to the lower riverbank for construction of the toe repairs, existing levee fill materials were excavated to create a ramp leading down to a midslope construction bench. Previously installed layers of native willows were trimmed to allow access over the lower riverbank, but were retained with intact rooting structures and exposed stems to encourage subsequent regeneration. Willow cuttings obtained from this trimming were bundled and placed into the water's edge for subsequent use in site revegetation. As a further cost-savings measure, excavated levee fill materials were stockpiled immediately adjacent to the site with the permission of the landowner for subsequent use in reconstructing the levee slopes.

A floating log boom of native coniferous logs with intact rootwads was chained together along the full length of the levee toe repair reach to deflect the river's current away from the toe of the riverbank, and to provide calm water for construction activities along the toe. A track-mounted hydraulic excavator then excavated dislodged toe materials, placed rock bedding, and reconstructed the damaged levee toe rock areas using four-to-six-foot diameter quarry stones.

At a spacing of every ten feet a quarry stone was deliberately selected so as to have a drilled hole passing through the stone, a condition created during drilling operations for blasting at the quarry site in Enumclaw.

Anchor chains were then passed through the drilled holes, and the floating log boom was then secured to these anchor stones with non-galvanized marine chain. In this way the log boom was first used as an instream flow deflector for turbidity control during instream toe rock placement, then installed permanently as a series of flow deflectors and large woody debris habitat structures along the full length of the repair site.

Turbidity measurements obtained by Flood Hazard Reduction Services section staff documented the success of this method, which is a substantial improvement on previous attempts to use floating turbidity curtains in the flowing river environment. After anchoring the large woody debris in place, rock toe buttress construction was completed up to the elevation of the ordinary high water mark.

Slopes above the ordinary high water mark were then reconstructed with several lifts of additional willow planting layers, using the willow cuttings obtained from initial trimming at the site, together with plantings of a variety of native shrub species. Plantings were limited to shrubs because the U.S. Army Corps of Engineers prohibits growth of trees on federally authorized levee systems, and because easement limitations prohibited a setback of the levee structure itself in order to create an area for tree plantings. Raised portions of the levee fill were compacted to 95% of maximum density at optimum moisture content, with compaction testing provided by staff from the County Soils Laboratory.

The levee crest was reconstructed as an access roadway with layers of crushed rock. Fill slopes were protected against erosion with a covering of biodegradable coir (coconut-fiber) geotextile fabric. Finished slope areas were then hydroseeded for additional erosion control. Project construction was completed on August 26, 2003 and the site will continue to be monitored for structural stability, plant growth and survival and fish habitat utilization consistent with the project's permit requirements.

### **3<sup>rd</sup> Avenue South Outfall Bank Stabilization River Mile: 24.4, Right Bank, City of Kent Cost: \$ 33,131**

The City of Kent constructed a new pump station and outfall pipeline to the Right Bank of the Green River at River Mile 24.4 and within the U.S. Army Corps of Engineers Section 205 Horseshoe Bend levee system, for which the District is the local sponsor. The new pump station and outfall was constructed for the purposes of providing stormwater drainage to the residential areas adjacent to 3<sup>rd</sup> Avenue South and is part of a system including a regional detention pond, which Kent has previously constructed immediately across South 259th Street from the downstream end of the McCoy/Breda portion of the Horseshoe Bend Levee.

During construction, the City of Kent's contractor began experiencing slope stability concerns and erosion problems with the outfall construction primarily due to the fact that the face slope



Finished slope areas were hydroseeded for additional erosion control.



Large woody debris with intact rootwads were chained together to anchor rocks to further deflect flows and provide habitat opportunities for native salmonids.



Prior to construction, significant portions of the earth fill under the burlap were washed out. The contractor covered the exposed slope area with black plastic sheeting secured by rubber tire weights as an interim measure to help prevent further erosion.





A long-reach track-mounted excavator was used to access the lower portions of the project area.



Alternating layers of live willow and dogwood cuttings and coir-wrapped geogrid fills were placed from the riverbank up to the top-of-bank along the road shoulder of South 259<sup>th</sup> Street.

of the levee embankment was not constructed with layers of willows integrated into geotextile fabric layers. The problems were also compounded by wet weather which saturated the slope material into a liquid mud-like condition and washed out a significant portion of the earth fill.

Based on the urgency of stabilizing this slope and in recognition of King County's levee repair expertise, the City of Kent asked King County to provide technical assistance and construction support to repair the levee slope at the outfall construction site location. The scope of work involved the stabilization of the outer three to five feet of soil depth for a distance along the riverbank of approximately 70 lineal feet, extending from the ordinary high water mark to the top-of-bank along the road shoulder of South 259<sup>th</sup> Street. Alternating layers of live willow cuttings and coir-wrapped geogrid fills were placed from the riverbank up to the top-of-bank along the road shoulder. The geogrids were tied into existing vegetation on each end of the project area and the disturbed area was hydroseeded.

The total cost of the project was \$33,131 and was fully reimbursed by the City of Kent.

# ***2003 YEAR-END REVENUE AND EXPENDITURE REPORT***

## **2002 YEAR-END FUND BALANCE**

The District's 2003 Budget started with a total fund balance as of December 31, 2002 of \$782,778 as reported in the District's 2002 Annual Report. Of this amount, \$546,930 was set aside in a designated fund balance allotment for pump station repairs and equipment replacement in the amount of \$427,323 and the balance of \$119,607 as a source of matching funds to leverage potential future state and federal assistance for flood damage repairs. The remaining \$235,848 of fund balance was undesignated.

## **ACTUAL 2003 REVENUE**

The District's actual cash revenue in 2003 totaled \$995,063. This was comprised of \$838,298 in net levy; \$45,687 from the Federal Emergency Management Agency through the City of Tukwila for the White Swam Revetment repair; \$40,000 in supplemental grant funds from the Washington State Department of Ecology for the Desimone Levee project constructed in 2002; \$33,131 from the City of Kent for the 3<sup>rd</sup> Avenue South Outfall bank stabilization project; \$28,715 in interest income from the designated and undesignated fund balance; \$5,000 in King County's WaterWorks grant funds; and \$4,232 in leasehold excise tax revenues.

<b>Sources of Revenue</b>	<b>Amount</b>
2003 Actual Net Levy Revenues:	\$ 838,298
City of Tukwila:	\$ 45,687
Washington State Department of Ecology Grant Funds:	\$ 40,000
City of Kent:	\$ 33,131
Interest Income from Designated and Undesignated Fund Balance:	\$ 28,715
King County WaterWorks Grant Funds:	\$ 5,000
Leasehold Excise Tax Revenues:	<u>\$ 4,232</u>
<b>TOTAL DISTRICT REVENUE:</b>	<b>\$ 995,063</b>







## ACTUAL 2003 EXPENDITURES

The combined District administration and maintenance expenditures during 2003 totaled \$1,178,683. These expenditures and charges are divided into two separate budget categories:

- (1) management and administration of the Green River Flood Control Zone District; and
- (2) maintenance, which includes pump station operations and maintenance, major river facility repairs, annual facility maintenance and vegetation management, and project performance monitoring. These expenditures are exclusive of the \$50,300 set aside for the for the designated fund balance contribution.

During 2003, \$180,559 was spent on management and administration activities and \$998,084 on the repair, maintenance and operations programs. These actual expenditures are further detailed below:

### Administration and Management

Program/District Management Labor Costs:	\$ 138,752
Indirect/Overhead Assessment (Net):	<u>\$ 41,847</u>
Administration Sub-total =	\$ 180,599

### Maintenance and Operations

Pump Station Operation and Maintenance:	\$ 181,441
Major River Facility Repair Projects:	\$ 667,447
Facility Maintenance & Vegetation Management:	\$ 98,255
Project Performance Monitoring and Assessment:	<u>\$ 50,941</u>
Maintenance Sub-total =	\$ 998,084

**Grand Total = \$ 1,178,683**

## DISTRICT ADMINISTRATION AND MANAGEMENT

District administrative and management expenditures in 2003 supported a combination of 1.5 full-time staff positions. In addition, the administration and management budget provided support to all District activities including:

- coordination of major and annual routine maintenance related work for various projects (e.g., site investigations, survey, engineering design, ecological support, permit applications and coordination, oversight of construction crews and equipment, overall project management);
- implementation of the new 10-year interlocal agreement for the management and administration of the Green River Flood Control Zone District between King County and the Cities of Auburn, Tukwila, Renton and Kent;

- grant contract management and administration (e.g., Washington State Department of Ecology Flood Control Assistance Account Program);
- annual budget development, analysis and monitoring;
- preparation of annual resolutions, financial plan and fiscal note for the District's Board of Supervisors and levy certification for King County's Department of Assessments;
- response to State Auditor's Office for background information on the District's finances and expenditures as part of the audit review;
- technical assistance to lower Green River Valley cities and other resource agencies such as the U.S. Army Corps of Engineers, the Soil Conservation Service and the U.S. Geological Survey;
- preparation of District's 2002 Annual Report;
- participation and coordination with other Green-Duwamish (WRIA 9) Watershed activities; and
- ongoing coordination and staffing of the District's Technical and Executive Committee meetings.

### **Administrative and Management Expenditures**

Salaries:	\$ 119,775
Labor Benefits, Industrial Insurance, Social Security:	\$ 12,142
Materials, Office Supplies, Printing, Training:	\$ 5,380
Washington State Auditor:	\$ 1,455
King County Overhead Charges:	<u>\$ 41,847</u>
<b>TOTAL:</b>	<b>\$ 180,599</b>

### **DISTRICT MAINTENANCE**

The District's maintenance budget includes all costs for the maintenance and operations of the Black River (P-1), Tukwila (P-17) and Southcenter/Segale pump stations; major river facility repairs and projects; and the annual maintenance and vegetation management program. Also, because of the direct association to the District's major maintenance programs and projects, the expenditures for project monitoring and assessment are also included in the District's Maintenance category.

### **Summary of District Maintenance Expenditures**

Pump Station Operation and Maintenance:	\$ 181,441
Major River Facility Repair Projects:	\$ 667,447
Facility Maintenance & Vegetation Management	\$ 98,255
Project Monitoring and Assessment:	<u>\$ 50,941</u>
<b>TOTAL:</b>	<b>\$ 998,084</b>







## Pump Station Operations and Maintenance

The pump station expenditures in 2003 includes one full-time pump station operator to oversee all the operations and maintenance of the Black River, Tukwila and Southcenter/Segale pump stations. In addition to the routine operations and maintenance, the pump station operator carries out many other activities, including:

- overseeing and recording and recording the seasonal in-migration of anadromous and resident cutthroat trout and steelhead normally between mid-September and January 31;
- overseeing the seasonal downstream out-migration passage from early April to mid-June of anadromous salmon and resident cutthroat trout and steelhead;
- coordination of fish migration data with the Cities of Renton and Kent, and the Muckleshoot Indian Tribe;
- grounds and property maintenance including the removal of trash and debris that collects in the forebay of the Black River pump station on a continuing basis; and
- coordination of annual inspections with the City of Renton's Fire Prevention Bureau and the Occupational Safety and Hazard Administration (OSHA) inspections at the Black River pump station.

## Pump Station Operations and Maintenance Expenditures

Salaries:	\$ 58,504
Labor Benefits:	\$ 24,900
Labor Overhead:	\$ 24,935
Utilities – Electricity, Natural Gas, Water, Diesel:	\$ 58,437
Materials and Supplies:	\$ 6,153
Maintenance Services:	\$ 1,952
King County Equipment:	<u>\$ 6,560</u>
<b>TOTAL:</b>	<b>\$ 181,441</b>

## Major River Facility Repair Projects

For the District's major facility repair maintenance projects, the expenditures include all labor and the associated benefits and overhead charges, materials, supplies and equipment for the completion of the Narita Levee, Segale Levee and 3<sup>rd</sup> Avenue South Outfall Bank Stabilization repair projects as well as follow-up maintenance requirements to the Pipeline Levee and Desimone Levee projects completed in 2002. (See pages 15-20 for more detailed information on the Narita Levee, Segale Levee and 3<sup>rd</sup> Avenue South Outfall Bank Stabilization projects.)

## Major River Facility Repair Project Expenditures

Salaries:	\$ 203,624
Labor Benefits:	\$ 86,668
Labor Overhead:	\$ 100,603
Materials, Supplies, Debris Disposal, Permits:	\$ 143,790
Contract Services (e.g., Rental Equipment):	\$ 52,140
King County Equipment:	<u>\$ 80,622</u>
<b>TOTAL:</b>	<b>\$ 667,447</b>

## Annual Maintenance & Vegetation Management Program

The District's annual maintenance and vegetation management program includes non-native vegetation removal and mowing of District facilities including the Tukwila and Horseshoe Bend Section 205 projects as required under the U.S. Army Corps of Engineers' Section 205 Program; noxious weed removal as required to carry out the mandates of state weed control law under Chapter 17.10 RCW; maintenance of access roads to the District's facilities; interpretive sign placement; small repairs and maintenance projects to flap gates and culverts; and watering of native vegetation planted following the 1998–2003 major maintenance projects.

## Annual Maintenance & Vegetation Management Program Expenditures

Salaries:	\$ 35,654
Labor Benefits:	\$ 16,511
Labor Overhead:	\$ 17,864
Materials, Supplies, Permits:	\$ 3,617
Contract Services (e.g., Rental Equipment):	\$ 18,635
King County Equipment:	<u>\$ 5,974</u>
<b>TOTAL:</b>	<b>\$ 98,255</b>

King County maintenance worker uses a chainsaw to remove debris that had become lodged within the Gilliam Creek Outfall along the Tukwila 205 levee system.







## Project Monitoring & Assessment Program

The District's 2003 maintenance expenditures also include the costs for the project monitoring and assessment program for proposed and completed major maintenance projects to monitor structural stability, plant growth and survival, and fish habitat utilization. This program provides baseline and post-construction data for project performance analysis and fish habitat utilization at project sites so that the District can continue to adequately provide flood protection and further enhance the natural health of the Green River and its tributaries.

The project monitoring and assessment program is being carried out to comply with: 1) the statutory requirements set forth in local, State and Federal permits, specifically the Washington State Hydraulic Project Approval and the Corps' Section 404 permit; and 2) the listing as threatened of Puget Sound chinook by the National Marine Fisheries Service in March 1999 and the listing as threatened of bull trout by the U.S. Fish and Wildlife Service in April 2001.

Data collected at previously constructed District projects will be used to demonstrate utilization by salmonids at these sites and for designing future major river repair projects along the lower Green River.

## Project Monitoring & Assessment Program Expenditures

Salaries:	\$ 21,695
Salary Benefits:	\$ 9,705
Salary Overhead:	\$ 17,899
Materials and Supplies:	\$ 842
King County Equipment:	<u>\$ 800</u>
<b>TOTAL:</b>	<b>\$ 50,941</b>



King County performs monitoring and turbidity measurements during the construction of the Narita Levee Toe Repair project.

## ***2003 YEAR-END DISTRICT FUND BALANCE***

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The District's fund began the 2003 year with \$782,778 in total designated and undesignated fund balance as reported in the District's 2002 Annual Report. During 2003, the District's fund realized a total of \$995,063 in credits and \$1,178,683 in debits. Therefore, the 2003 fund balance realized a net decrease in the amount of \$183,620.

The following table illustrates the activity to the District's fund in 2003.

### **2003 DISTRICT FUND ACTIVITY**

2002 Year-End Fund Balance:	\$ 782,778
2003 Actual Net Levy Revenues:	\$ 838,298
City of Tukwila:	\$ 45,687
Washington State Department of Ecology Grant Funds:	\$ 40,000
City of Kent:	\$ 33,131
Interest Income from Designated and Undesignated Fund Balance:	\$ 28,715
King County WaterWorks Grant Funds:	\$ 5,000
Leasehold Excise Tax Revenues:	\$ 4,232
Total of 2003 District Expenditures:	<u>\$(1,178,683)</u>
<b>2003 YEAR-END FUND BALANCE:</b>	<b>\$ 599,158</b>
<b>NET DECREASE TO FUND BALANCE:</b>	<b>\$ 183,620</b>





## Designated Fund Balance

On July 19, 1993 the Green River Flood Control Zone District's Board of Supervisors, passed Resolution No. GR1993-2 to set aside, or "designate," an initial amount of \$94,230 from the District's undesignated fund balance for two specific purposes:

- 1) future use as local match for federal and state disaster assistance funding and grants following Presidential-declared flood disaster events; and
- 2) repair, replacement and upgrades of equipment at the Green River pump stations.

Resolution No. GR1993-2 also established a process whereby \$50,300 in District funds are set aside annually: \$11,000 for local flood match and \$39,300 for pump station equipment repair, replacement and upgrades. These designations were consistent with the recommendation approved by the Green River Basin Executive Committee on November 19, 1992 and are target figures based on annual District tax revenue collections.

Local flood match and pump station repair designations to date total \$130,607 and \$466,623, respectively, for a combined total of \$597,230 which includes the 2003 contributions. These designations are consistent with the Green River Basin Executive Committee and Basin Technical Committee recommendations in 1993.

Below in a table of the designated fund balance activity since its inception in 1993:

### DESIGNATED FUND BALANCE ACTIVITY

Year	Flood Match	Equipment	Total	Annual Total
1993	\$ 20,607	\$ 73,623	\$ 94,230	\$ 94,230
1994	\$ 11,000	\$ 39,300	\$ 50,300	\$ 144,530
1995	\$ 11,000	\$ 39,300	\$ 50,300	\$ 194,830
1996	\$ 11,000	\$ 39,300	\$ 50,300	\$ 245,130
1997	\$ 11,000	\$ 39,300	\$ 50,300	\$ 295,430
1998	\$ 11,000	\$ 39,300	\$ 50,300	\$ 345,730
1999	\$ 11,000	\$ 39,300	\$ 50,300	\$ 396,030
2000	\$ 11,000	\$ 39,300	\$ 50,300	\$ 446,330
2001	\$ 11,000	\$ 39,300	\$ 50,300	\$ 496,630
2002	\$ 11,000	\$ 39,300	\$ 50,300	\$ 546,930
2003	\$ 11,000	\$ 39,300	\$ 50,300	\$ 597,230
<b>Total</b>	<b>\$ 130,607</b>	<b>\$ 466,623</b>	<b>\$ 597,230</b>	



## Undesignated Fund Balance

Additional District fund balance revenues beyond the \$50,300 designated on an annual basis are to be used to supplement Green River maintenance activities. These funds and additional income such as that from interest, grant revenue or property sales are set aside in the undesignated fund balance for future District needs. As of December 31, 2003, \$1,928 was set aside in the undesignated fund balance.

Because of the outstanding maintenance needs in the District, the undesignated fund balance and the designated fund balance provide an important means of supplementing the District's limited ability to complete necessary repair projects using only the annual levy revenues. With the limits in federal and state funds available for major river facility repair projects, the fund balance enables the District to continue to address existing, unrepaired facility damages. The fund balance also provides additional flexibility to respond to future flood events and new programs and requirements imposed upon the District's work program. Since 2001 when the District's undesignated fund balance reached a total of \$624,252, nearly all of these funds have been appropriated towards major maintenance and repair projects in 2002 and 2003 as directed by the Executive and Technical Committees.

As shown in the table below, the District's total designated and undesignated fund balance at the end of 2003 is \$599,158. As stated above, \$597,230 of this total has been designated for local flood match and pump station purposes since 1993. This leaves the balance of \$1,928 as undesignated fund balance.

### 2003 FUND BALANCE SUMMARY

Designated Fund Balance as of 12/31/03:	
• Local Flood Match Funds	\$ 130,607
• Pump Station Equipment Funds	\$ 466,623
Undesignated Fund Balance as of 12/31/03:	<u>\$ 1,928</u>
<b>TOTAL FUND BALANCE AS OF 12/31/03:</b>	<b>\$ 599,158</b>







## 2004 BUDGET

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The 2004 Green River Flood Control Zone District budget was approved by the District's Board of Supervisors on November 24, 2003 by Resolution No. GR 31. The certified levy rate by King County's Assessors Office for 2004 is \$0.04668 per \$1,000 of assessed value; a property assessed at \$250,000 would therefore pay approximately \$11.67 per year. The 2004 levy is an estimated annual reduction of \$0.06 per year from 2003 and a total annual reduction of \$1.10 from the 2000 levy. Based on this levy rate, 2003 collections are expected to total \$873,767.

The District's budget authorized by Resolution No. GR 31 specifies how projected revenue from the District levy will be disbursed. Consistent with the requirements of RCW 86.15.140, the District's budget is categorized as follows:

### 2004 APPROVED BUDGET

District Administration and Management:	\$ 352,762
District Maintenance:	
• Major River Facility Repair Projects	\$ 369,713
• Pump Station Operation, Maintenance & Capital Improvements	\$ 201,848
• Annual Routine Maintenance & Repair Projects	\$ 89,716
• Project Performance Monitoring & Assessments	<u>\$ 27,648</u>
Total Approved 2004 Spending Authority:	\$ 1,041,687
Contribution to Designated Fund Balance:	
• Local Flood Match Funds	\$ 11,000
• Pump Station Equipment Repair/Replacement	<u>\$ 39,300</u>
<b>2004 Approved Budget</b>	<b>\$ 1,091,987</b>

## 2004 GOALS

The 2004 goals for the Green River Flood Control Zone District include the following:

- Coordinate District activities, including staffing of Executive and Technical Committees; preparation of flood damage repair project reimbursement documentation, annual budgets, work programs, annual reports, and requested work products for review and approval by the Green River cities as provided for in the District's Interlocal Agreement; and completion of the 2003 Annual Report.
- Continue risk-based flood damage analysis and assessment to more accurately determine facilities subject to increased susceptibility to potential flood-related damages and the expected average annual avoided damage, and to prioritize future levee maintenance projects.
- Evaluate the District's capability of funding future repairs to critical flood control facilities through grants and other means of revenue enhancements available to the District.
- Continue to implement the Lower Green River Flood Response Manual and the Post-Flood Recovery Plan for the Lower Green River Basin to provide coordinated interjurisdictional flood response programs and activities between King County and the Green River cities to prepare for and respond to future flood events.
- Work with the United States Army Corps of Engineers on operations of Howard Hanson Dam to coordinate and improve the level of downstream flood protection and limit the impacts on district-maintained flood protection facilities. Coordinate District programs with other United States Army Corps of Engineers funding and regulatory authorities such as the Green River Ecosystem Restoration Project, Emergency Flood Repair Program and Section 404 of the Clean Water Act.
- Work with the Green River Watershed Steering Committee and Watershed Forum and other agencies in the Green/Duwamish Water Resource Inventory Area on salmon recovery plans and programs relating to the recovery of native salmonid species and the restoration of salmonid and riparian habitat in response to Endangered Species Act requirements.
- Manage, monitor and meet contract requirements of grant awards for river maintenance projects and other activities, and pursue to the fullest extent practicable all federal, state and local funding opportunities, grants and disaster recovery assistance.
- Request federal and state financial assistance for Green River flood damage repair projects and levee improvements, and complete required documentation to secure reimbursement from these agencies.
- Respond to public inquiries and provide technical support to the Green River cities on development proposals that affect the Pump Operations Procedures Plan or the structural integrity and maintenance requirements of the district's flood protection facilities, and review and assess the current Pump Operations Procedures Plan and evaluate the need to update the Plan to address additional operational requirements that may result from any development proposal.
- Jointly work with the Cities of Auburn and Kent to finalize and begin implementation of the Mill Creek/Mullen Slough Basin Action Plan to minimize chronic flooding, improve drainage and conveyance conditions, improvement agricultural waterways, and enhance riparian and salmonid habitat.







- Coordinate to the fullest extent possible community involvement and volunteer participation to plant native tree and shrub species at selected project sites, and the education of the District's goals and objectives for flood hazard reduction.
- Conduct 2004 spring and fall river maintenance assessments, prioritize flood damage repair projects, complete project design and apply for needed permits for 2004 maintenance and repair projects. Coordinate repair projects through review and concurrence as required by the U.S. Army Corps of Engineers, the National Marine Fisheries Service and the U.S. Fish and Wildlife Service to meet Endangered Species Act requirements.
- Complete annual reports for the Tukwila and Horseshoe Bend 205 Projects for the U.S. Army Corps of Engineers.
- Maintain and operate the Black River, Tukwila, and Segale/Southcenter Pump Stations to King County standards and the adopted Pump Operations Procedures Plan, including regular assessment of all pump station functions to ensure optimal and cost-efficient performance.
- In support of the District's designated fund balance for pump plant equipment repair/replacement, develop a pump plant replacement plan and amortization schedule to guide, if necessary, proposed major renovation and replacement of the equipment and/or seismic retrofitting of the fuel storage area at the Black River Pump Station to ensure consistency with contemporary standards and operating requirements.
- Estimate 2004 maintenance project costs and coordinate availability of equipment, supplies, materials, and King County department of transportation's roads services division maintenance crews as needed to construct the 2004 projects.
- Provide engineering and other technical assistance for federal and state financial assistance requests for Green River flood damage repair projects and levee improvements.
- Oversee management and construction of the District's 2004 flood control facility maintenance projects.
- Monitor and assess performance of completed maintenance projects in compliance with permit conditions and in conformance with the requirements of the Endangered Species Act and other federal, state and local permits.
- Operate pump stations in the event of a flood on the Green River, including enhanced communication with county personnel at the Flood Warning Center, flood patrols in the field and with personnel at the Green River cities.
- Provide technical support to King County's Flood Hazard Reduction Services Section on its update to the county's comprehensive Flood Hazard Reduction Plan, implementation of King County's Community Rating System, development of a six year Capital Improvement Plan, and other projects and programs as needed.



## 2003-2004 GREEN RIVER FLOOD CONTROL ZONE DISTRICT ROSTER

### EXECUTIVE COMMITTEE

**The Honorable Pete Lewis, Mayor**

City of Auburn  
25 West Main Street  
Auburn, WA 98001  
253-931-3000

**The Honorable Steven Mullet, Mayor**

City of Tukwila  
6200 Southcenter Boulevard  
Tukwila, WA 98188  
206-433-1850

**The Honorable Julia Patterson,  
Councilmember  
District #13**

King County Council  
1200 King County Courthouse  
516 Third Avenue  
Seattle, WA 98104  
206-296-1013

**The Honorable Ron Sims,  
King County Executive**

400 King County Courthouse  
516 Third Avenue, Room 400  
Seattle, WA 98104  
206-296-4040

**The Honorable Kathy Keolker-  
Wheeler, Mayor**

City of Renton  
1055 South Grady Way  
Renton, WA 98055  
425-430-6500

**The Honorable James White, Mayor**

City of Kent  
220 Fourth Avenue South  
Kent, WA 98032  
253-856-5700





## 2003-2004 GREEN RIVER FLOOD CONTROL ZONE DISTRICT ROSTER

continued

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**Tim Carlaw, Storm Drainage Engineer**  
**Duane Huskey, Utilities Engineer**  
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**Bill Wolinski, Environmental Engineering Manager**  
**Mike Mactutis, Environmental Engineer Supervisor**  
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**Ron Straka, Utility Engineering Supervisor**  
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**Jim Morrow, Director**  
**Ryan Larson, Sr. Surface Water Mgmt. Engineer**  
City of Tukwila Public Works Department  
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**Daryl Grigsby, Division Director**  
**Dave Clark, Manager, Flood Hazard Reduction Services Section**  
**Steve Bleifuhs, Program Coordinator**  
**Andy Levesque, Senior Engineer**  
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Water and Land Resources Division  
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## **2003-2004 GREEN RIVER FLOOD CONTROL ZONE DISTRICT ROSTER**

continued

### **GREEN RIVER FLOOD CONTROL ZONE DISTRICT PROGRAM COORDINATION/TECHNICAL STAFF**

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206-296-6519 FAX 206-296-0192

This information is available in alternative  
formats upon request for individuals with  
disabilities. Please call 206-296-6519 or TTY 711.







## ***Appendix A***

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**Washington State Auditor's Office**  
**Accountability Audit Report**

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**Green River Flood Control Zone District**  
**King County**

**Audit Period**  
**January 1, 1997 through December 31, 2001**

**Report No. 64644**

Issue Date  
**April 11, 2003**



Washington \_\_\_\_\_  
***State Auditor***  
\_\_\_\_\_  
Brian Sonntag



# Audit Report

## Green River Flood Control Zone District King County January 1, 1997 through December 31, 2001

### ***ABOUT THE AUDIT***

This report contains the results of our independent audit of the Green River Flood Control Zone District for the period January 1, 1997, through December 31, 2001.

In keeping with general auditing practices, we did not examine every portion of the District's financial activities during the audit. The areas examined were those representing the highest risk of noncompliance, misappropriation or misuse. We performed audit procedures to determine whether the District complied with applicable state laws and regulations and its own policies and procedures. We also evaluated the District's accountability for public assets.

Specific areas examined included the legality of payments, compliance with state bid laws, compliance with the Open Public Meetings Act and administration fees charged to the District by King County.

### ***ABOUT THE DISTRICT***

The District was formed in 1966 and was activated in December 1992. The purpose of the District is to provide a funding base for operation and maintenance of levees, revetments and pump stations on the Green River Basin. The King County Council governs the District.

### ***RESULTS***

In the areas examined, the District complied with state laws and regulations and its own policies and procedures.

We thank District officials and staff for their assistance and cooperation during the audit.